ArevaEPRDCPEm Resource

From: Pederson Ronda M (AREVA NP INC) [Ronda.Pederson@areva.com]
Sent: Wednesday, April 29, 2009 3:28 PM
To: Getachew Tesfaye
Cc: BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); DUNCAN Leslie E (AREVA NP INC)
Subject: Response to U.S. EPR Design Certification Application RAI No. 156, FSAR Ch 14, Supplement 1
Attachments: RAI 156 Supplement 1 Response US EPR DC.pdf

Getachew,

AREVA NP Inc. provided responses to 5 of the 7 questions of RAI No. 156 on February 6, 2009. The attached file, "RAI 156 Supplement 1 Response US EPR DC.pdf" provides technically correct and complete responses to the remaining 2 questions, as committed.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 156 Questions 14.03.03-27 and 14.03.03-28.

The following table indicates the respective pages in the response document, "RAI 156 Supplement 1 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 156 — 14.03.03-27	2	6
RAI 156 — 14.03.03-28	7	8

This concludes the formal AREVA NP response to RAI 156, and there are no questions from this RAI for which AREVA NP has not provided responses.

Sincerely,

Ronda Pederson
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Licensing Manager, U.S. EPR Design Certification
AREVA NP Inc.
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From: WELLS Russell D (AREVA NP INC)
Sent: Friday, February 06, 2009 12:51 PM
To: 'Getachew Tesfaye'
Cc: Pederson Ronda M (AREVA NP INC); BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); SLIVA Dana (EXT)
Subject: Response to U.S. EPR Design Certification Application RAI No. 156, FSAR Ch 14

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 156 Response US EPR DC.pdf" provides technically correct and complete responses to 5 of the 7 questions.

Appended to this file are affected pages of the U.S. EPR Final Safety Analysis Report in redline-strikeout format which support the response to RAI 156 Question 14.03.03-26.

The following table indicates the respective pages in the response document, "RAI 156 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 156 — 14.03.03-25	2	3
RAI 156 — 14.03.03-26	4	6
RAI 156 — 14.03.03-27	7	8
RAI 156 — 14.03.03-28	9	9
RAI 156 — 14.03.03-29	10	10
RAI 156 — 14.03.03-30	11	11
RAI 156 — 14.03.03-31	12	12

A complete answer is not provided for 2 of the 7 questions. The schedule for a technically correct and complete response to this question is provided below.

Question #	Response Date
RAI 156 — 14.03.03-27	April 30, 2009
RAI 156 — 14.03.03-28	April 30, 2009

Sincerely,

(Russ Wells on behalf of)
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From: Getachew Tesfaye [mailto:Getachew.Tesfaye@nrc.gov]
Sent: Thursday, January 08, 2009 12:52 PM
To: ZZ-DL-A-USEPR-DL
Cc: Ching Ng; Jennifer Dixon-Herrity; Anthony Hsia; Michael Miernicki; Joseph Colaccino; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 156 (1768), FSARCh. 14

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 12, 2008, and discussed with your staff on January 6, 2009. No changes were made to the Draft RAI Questions as a result of that discussion. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any

RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,
Getachew Tesfaye
Sr. Project Manager
NRO/DNRL/NARP
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Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 438

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Response to

Request for Additional Information No. 156 (1768), Supplement 1, Revision 0

01/08/2009

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 14.03.03 - Piping Systems and Components - Inspections, Tests, Analyses, and Acceptance Criteria
Application FSAR Section: 14.3.3

QUESTIONS for Engineering Mechanics Branch 2 (ESBWR/ABWR Projects) (EMB2)

Question 14.03.03-27:

a) Piping design reports

For piping designated as ASME Code Section III, the ITA of item 3.4a of Table 2.2.1-5 states that an analysis of the as-designed piping will be performed in accordance with ASME Code Section III requirement for piping indicated on Figure 2.2.1-1. The AC column states that the ASME Code Section III stress reports exist and conclude that the as-design piping meets ASME Code Section III requirements.

(i) In the ITA column, an inspection of the ASME Code Design Report, as oppose to an analysis, should be conducted. This will bring consistency between this ITAAC and the components as-design ITAAC in item 3.1 of Table 2.2.1-5.

(ii) In the AC column, it is not clear to the staff that what type of reports shall exist. The staff reviewed Tier 1 and Tier 2 information but the applicant did not identify what the particular reports are or the contents of the reports. SRP 14.3.3 indicates that an acceptable version of an ASME Code certified stress report is the design document required by ASME Code Section III, Subarticle NCA-3550. A certified design report provides assurance that requirements of ASME Code, Section III for design have been met and that the design complies with the design specifications.

The staff requests the applicant to revise the AC and ITA to identify the certified Design Report as discussed in Subarticle NCA-3550 or other appropriate design documents. These two questions are also applicable to Tier 1, Sections 2.2.2, 2.2.3, 2.2.3, 2.2.5, 2.2.6, 2.2.7, 2.3.3, 2.5.4, 2.7.1, 2.7.2, 2.7.11, 2.8.2, 2.8.6, 2.8.7, and 3.5.3.

b) Piping as-built ITAAC

As described in SRP 14.3.3, one ITAAC item that should be included is to require that a report exists and documents the result of an as-built reconciliation analysis confirming the final piping systems have been built in accordance with the ASME Code certified stress reports. In EPR FSAR Tier 1 Table 2.2.1-5, an ITAAC for as-built reconciliation is not included.

The staff requests the applicant to include an ITAAC to reflect that an analysis will be performed to reconcile the as-built condition of the piping system with approved design documents. Corresponding addition to section 2.2.1 under subsection 3.0 should also be made. This question is also applicable to Tier 1, Sections 2.2.2, 2.2.3, 2.2.3, 2.2.5, 2.2.6, 2.2.7, 2.3.3, 2.5.4, 2.7.1, 2.7.2, 2.7.11, 2.8.2, 2.8.6, 2.8.7, and 3.5.3.

c) Piping Fabrication Installation ITAAC

For piping designated as ASME Code Section III, SRP 14.3.3 identifies that a certified report provides assurance that requirements of the ASME Code, Section III for fabrication, installation, and examination have been met. In EPR FSAR Tier 1 Table 2.2.1-5, an ITAAC for fabrication and installation of piping is not included.

The staff requests the applicant to include an ITAAC to reflect that an inspection of the piping will be conducted. Corresponding addition to section 2.2.1 under subsection 3.0 should also be

made. This question is also applicable to Tier 1, Sections 2.2.2, 2.2.3, 2.2.3, 2.2.5, 2.2.6, 2.2.7, 2.3.3, 2.5.4, 2.7.1, 2.7.2, 2.7.11, 2.8.2, 2.8.6, 2.8.7, and 3.5.3.

d) Piping Support as-built ITAAC

As described in SRP 14.3.3, one ITAAC item that should be included is requiring that a report exists and documents the result of an as-built reconciliation analysis confirming the piping supports have been built in accordance with the ASME Code certified stress reports. In EPR FSAR Tier 1 Table 2.2.1-5, an ITAAC for as-built reconciliation is not included.

The staff requests the applicant to provide an ITAAC to reflect that an analysis will be performed to reconcile the as-built condition of the piping supports with approved design documents. Corresponding addition to section 2.2.1 under subsection 3.0 should also be made. This question is also applicable to Tier 1, Sections 2.2.2, 2.2.3, 2.2.3, 2.2.5, 2.2.6, 2.2.7, 2.3.3, 2.5.4, 2.7.1, 2.7.2, 2.7.11, 2.8.2, 2.8.6, and 2.8.7.

Response to Question 14.03.03-27:

a) Piping Design Reports

ASME Code Section III piping ITAAC in U.S. EPR FSAR Tier 1, Section 2.2.1, reactor coolant system (RCS), will be revised as suggested in the question:

- U.S. EPR FSAR Tier 1, Section 2.2.1, Item 3.4 will be deleted, and the following items will be added to U.S. EPR FSAR Tier 1, Section 2.2.1:

  3.20 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are designed in accordance with ASME Code Section III requirements.
  3.21 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with an ASME Code Section III Design Report.
  3.22 Pressure boundary welds in portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are in accordance with ASME Code Section III.
  3.23 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 retain their pressure boundary integrity at their design pressure.
  3.24 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with ASME Code Section III requirements.

- U.S. EPR FSAR Tier 1, Table 2.2.1-5, Item 3.4 will be deleted, and the ITAAC listed in Table 14.03.03-27-1 will be added to U.S. EPR FSAR Tier 1, Table 2.2.1-5.

Piping ITAAC in U.S. EPR FSAR Tier 1 that are similar to the RCS ITAAC in U.S. EPR FSAR Tier 1, Section 2.2.1, Item 3.4 will also be revised. The ASME Code Section III piping ITAAC being revised are listed in Table 14.03.03-27-2.

b) Piping as-built ITAAC

See the Response to Question 14.03.03-27, Part a) above.

c) Piping fabrication ITAAC

See the Response to Question 14.03.03-27, Part a) above.

d) Piping support As-built ITAAC

See the Response to Question 14.03.03-28.

FSAR Impact:

U.S. EPR FSAR Tier 1, Chapter 2 and Chapter 3 will be revised as described in the response and indicated on the enclosed markup.

Table 14.03.03-27-1—RCS Piping ITAAC Added to U.S. EPR FSAR Tier 1, Section 2.2.1

	Commitment Wording	Inspections, Tests, Analyses	Acceptance Criteria
3.20	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1.
3.21	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.22	Pressure boundary welds in portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 has been performed in accordance with ASME Code Section III.
3.23	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.24	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

Table 14.03.03-27-2—Piping ITAAC

U.S. EPR FSAR Tier 1 Section	Piping ITAAC deleted	Piping ITAAC added
2.2.1	3.4	3.20 through 3.24
2.2.2	3.2	3.8 through 3.12
2.2.3	3.3	3.10 through 3.14
2.2.4	3.3	3.9 through 3.13
2.2.5	3.3	3.9 through 3.13
2.2.6	3.3	3.10 through 3.14
2.2.7	3.3	3.10 through 3.14
2.3.3	3.3	3.9 through 3.13
2.5.4	3.2	3.16 through 3.20
2.7.1	3.3	3.9 through 3.13
2.7.2	3.3	3.9 through 3.13
2.7.11	3.3	3.12 through 3.16
2.8.2	3.2	3.8 through 3.12
2.8.6	3.3	3.9 through 3.13
2.8.7	3.2	3.8 through 3.12
3.5	3.3	3.7 through 3.11

Question 14.03.03-28:

In EPR FSAR Tier 1, Section 3.5-3, the applicant identifies that piping in Figure 3.5-1 as ASME Code Section III will be designed, welded, and tested in accordance with ASME Code Section III. In Table 3.5-3, associated ITAAC entries are listed also. However, the applicant does not provide any ITAAC for piping supports, shown as ASME Code Section III, of Figure 3.5-1.

The staff requests the applicant to include ITAAC entries for piping supports, shown as ASME Code Section III, of Figure 3.5-1 or provide justification for not including any ITAAC. Corresponding changes to Tier 1 Section 3.5 under item 3.0 should also be made.

Response to Question 14.03.03-28:

ITAAC for piping supports listed in Table 14.03.03-28-1 will be deleted from U.S. EPR FSAR Tier 1 based on the following considerations:

1. Existing certified designs do not include ITAAC on piping supports.
2. Standard Review Plan (SRP) 14.3 provides guidance that piping supports are not within the scope of Tier 1. SRP 14.3 (March 2007), page 14.3.3-7 states that "ASME Code Class 1, 2 or 3 structural welds (pipe support welds) are not within Tier 1 scope because they indirectly prevent or mitigate accidents or events (e.g., pipe supports protect the piping but the piping itself is needed for accident mitigation)."

ITAAC for piping support specifications listed in Table 14.03.03-28-1 will also be deleted. Similar ITAAC for components and piping specifications were deleted in the Response to RAI 149, Question 03.09.0-1.

FSAR Impact:

U.S. EPR FSAR Tier 1, Chapter 2 will be revised as described in the response and indicated on the enclosed markup.

Table 14.03.03-28-1—ITAAC for Piping Supports and Specifications

U.S. EPR FSAR Tier 1 Section	ITAAC number for Piping Supports	ITAAC number for Piping Support Specifications
2.2.1	3.10	3.14
2.2.2	3.4	3.7
2.2.3	3.5	3.9
2.2.4	3.5	3.8
2.2.5	3.5	3.8
2.2.6	3.5	3.9
2.2.7	3.5	3.9
2.3.3	3.5	3.8
2.5.4	3.3	3.6
2.7.1	3.5	3.8
2.7.2	3.5	3.8
2.7.11	3.8	3.11
2.8.2	3.4	3.7
2.8.6	3.5	3.8
2.8.7	3.4	3.7

U.S. EPR Final Safety Analysis Report Markups

2.0 Arrangement

2.1 The functional arrangement of the RCS is shown on Figure 2.2.1-1—RCS Functional Arrangement.

2.2 The functional arrangement of the RPV and heavy reflector is shown on Figure 2.2.1-2—RPV Functional Arrangement.

2.3 The location of the RCS equipment is as listed in Table 2.2.1-1—RCS Equipment Mechanical Design.

2.4 ~~Physical separation exists between the RCS loops~~The RCS loops are physically separated from each other.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.1-1 as ASME Code Section III, other than RPV internals, is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

3.2 Check valves listed in Table 2.2.1-1 will function as listed in Table 2.2.1-1.

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3.3 Equipment identified as Seismic Category 1 in Table 2.2.1-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.1-1.

3.4 ~~Piping indicated on Figure 2.2.1-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.5 The steam outlet nozzles on the SGs include flow-limiting devices.

3.6 The RCP motors include a device to prevent reverse rotation.

3.7 The applicable piping and interconnected component nozzles listed in Table 2.2.1-1 are evaluated for LBB.

3.8 The RPV internals ~~are designed to~~will withstand the effects of flow-induced vibration.

3.9 The RCS is designed to allow movement of the components as necessary due to thermal expansion and contraction.

3.10 ~~Supports for piping shown as ASME Section III on Figure 2.2.1-1 are designed in accordance with ASME Section III~~Deleted.

3.11 Components listed as ASME Code Class I in Table 2.2.1-1 are analyzed for fatigue in accordance with ASME Section III Class I.

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3.12 ~~Specifications exist for components listed as ASME Section III in Table 2.2.1-1~~ Deleted.

3.13 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.1-1~~ Deleted.

3.14 ~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.1-1~~Deleted.

3.15 ~~Specifications exist for core support structures shown on Figure 2.2.1-2~~Deleted.

3.16 RPV internals listed in Table 2.2.1-1 are designed in accordance with ASME Code Section III, Subsection NG.

3.17 Core support structure welds meet ASME Code Section III, Subsection NG requirements.

3.18 The RPV internals are provided with irradiation specimen guide baskets to hold capsules containing RPV material surveillance specimens.

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3.19 Each RCP contains an oil collection system.

3.20 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are designed in accordance with ASME Code Section III requirements.

3.21 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with an ASME Code Section III Design Report.

3.22 Pressure boundary welds in portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are in accordance with ASME Code Section III.

3.23 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 retain their pressure boundary integrity at their design pressure.

3.24 Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Tables 2.2.1-2—Equipment and Valve Actuator Power Supplies and Controls and 2.2.1-3—Instrumentation Power Supplies, Classification, and Displays are retrievable in the main control room (MCR) and remote shutdown station (RSS) as listed in Tables 2.2.1-2 and 2.2.1-3.

4.2 The RCS system equipment controls are provided in the MCR and RSS as listed in Table 2.2.1-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~io~~r ~~and~~ control system (PACS) module in Table 2.2.1-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E listed in Tables 2.2.1-2 and 2.2.1-3 are powered from the Class 1E divisions as listed in Tables 2.2.1-2 and 2.2.1-3 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.2.1-2 fail to the position noted in Table 2.2.1-2 on loss of power.

5.3 The power supply arrangement is such that only two emergency diesels are required to operate ~~in order~~ to supply power to the minimum required number of PZR heaters.

Table 2.2.1-5—RCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 9 Sheets)

~~Design~~ Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		~~e~~b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.2.1-1, other than RPV internals,to verify that the equipment including anchorage is installed as specified on the construction drawings.	~~e~~b. ~~The as-installed equipment supports and restraints are seismically bounded by tested or analyzed conditions~~Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.2.1-1, other than RPV internals, including anchorage is installed as specified on the construction drawings.
3.4	Deleted.~~Piping indicated in Figure 2.2.1-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.2.1-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.1-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.1-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.1-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.1-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.1-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

14.03.03-27

Table 2.2.1-5—RCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 9 Sheets)

~~Design~~ Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.8	The RPV internals ~~are designed to~~will withstand the effects of flow-induced vibration.	a. ~~Type tests, t~~Tests~~,~~ and analyses~~, or a combination of tests and analyses~~of test results will be performed ~~for~~ on ~~the first~~a plant containing RPV internals representative of the U.S. EPR~~only~~.	a. ~~The RPV internals can withstand the effects of flow-induced vibration.~~A report exists and concludes that RPV internals have no observable damage, no loose parts, and stress is within ASME code limits.
		b. An inspection will be performed after hot functional testing.	b. Inspections show that the RPV internals have no observable damage or loose parts.
3.9	The RCS is designed to allow movement of the components as necessary due to thermal expansion and contraction.	A test of the RCS will be performed.	The measured gaps meet the specification requirements for the necessary component supports.
3.10	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.1-1 will be designed in accordance with ASME section III.~~	Deleted~~An analysis will be performed~~.	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.1-1 are designed in accordance with ASME section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.1-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.1-1.~~
3.11	Components listed as ASME Code Class I in Table 2.2.1-1 will be analyzed for fatigue per ASME Section	An analysis will be performed.	a. Fatigue analysis has been performed for components listed as ASME Code Class I in Table 2.2.1-1.

14.03.03-28

Table 2.2.1-5—RCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 9 Sheets)

	~~Design~~ Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
	III Class I.		b. For components listed as ASME code Class I in Table 2.2.1-1, operating modes where peak stresses are within ten percent of allowable have been identified.
3.12	~~Specifications exist for components listed as ASME Section III in Table 2.2.1-1~~ Deleted.	~~An inspection will be performed~~ Deleted.	~~Specifications exist for components listed as ASME Section III in Table 2.2.1-1~~ Deleted.
3.13	~~Specifications exist for piping shown as ASME Section III on Figure 2.2.1-1~~ Deleted.	~~An inspection will be performed~~ Deleted.	~~Specifications exist for piping identified as ASME Section III on Figure 2.2.1-1~~ Deleted.
3.14	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.1-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.1-1.~~
3.15	~~Specifications exist for core support structures shown on figure 2.2.1-2~~Deleted.	~~An inspection will be performed.~~ Deleted.	~~Specifications exist for core support structures shown on Figure 2.2.1-2.~~ Deleted.
3.16	RPV internals listed in Table 2.2.1-1 are designed in accordance with ASME Code Section III, Subsection NG.	An analysis will be performed.	An ASME Code Section III, Subsection NG stress report exists for each RPV internal component listed in Table 2.2.1-1.
3.17	Core support structure welds meet ASME Code Section III, Subsection NG requirements.	Inspections of core support structure welds will be performed.	Inspection reports show that core support structure welds for the following RPV welded components listed in Table 2.2.1-1 meet ASME Code Section III, Subsection NG requirements: core barrel, lower support plate, upper support plate, normal support columns, and control rod guide assembly columns.

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Table 2.2.1-5—RCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 9 Sheets)

~~Design~~ Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.18	The RPV internals are provided with irradiation specimen guide baskets to hold capsules containing RPV material surveillance specimens.	An inspection will be performed.	Two guide baskets are provided, located on opposite sides of the RPV, and each guide basket includes provisions to hold two material surveillance capsules.
3.19	Each RCP contains an oil collection system.	a. Analyses will be performed.	a. Analyses demonstrate that the oil collection system is designed 1) to withstand a safe-shutdown earthquake, 2) to collect lube oil from leakage sites in the RCP lube oil system, and 3) So that the drain line and collection tank are large enough to accommodate the largest potential oil leak.
		b. An inspection will be performed on each RCP.	b. An inspection of each RCP verifies an oil collection system is installed on each RCP.
3.20	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1.
3.21	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.

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Table 2.2.1-5—RCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 9 Sheets)

~~Design~~ Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.22	Pressure boundary welds in portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 has been performed in accordance with ASME Code Section III.
3.23	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.24	Portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1 are installed in accordance with ASME code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the RCS piping shown as ASME Code Section III in Figure 2.2.1-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays listed in Tables 2.2.1-2 and 2.2.1-3 are retrievable in the MCR and RSS as listed in Tables 2.2.1-2 and 2.2.1-3.	Inspections will be performed for the existence or retrievability of the displays in the MCR or the RSS as listed in Tables 2.2.1-2 and 2.2.1-3.	a. The displays listed in Tables 2.2.1-2 and 2.2.1~~.~~-3 as being retrievable in the MCR can be retrieved in the MCR. b. The displays listed in Tables 2.2.1-2 and 2.2.1-3 as being retrievable in the RSS can be retrieved in the RSS.
4.2	The RCS system equipment controls are provided in the MCR and RSS as identified in Table 2.2.1-2.	Tests will be performed for the existence of control signals from the MCR and the RSS to the equipment listed in Table 2.2.1-2.	a. The controls listed in Table 2.2.1-2 as being in the MCR exist in the MCR. b. The controls listed in Table 2.2.1-2 as being in the RSS exist in the RSS.

2.2.2 In-Containment Refueling Water Storage Tank System

1.0 Description

The in-containment refueling water storage tank system (IRWSTS) is a safety-related system. The IRWSTS provides the following safety-related functions:

- Borated water supply for the emergency core cooling systems.
- Containment isolation.

The IRWSTS provides the following non-safety-related function:

- Borated water supply to the severe accident heat removal system (SAHRS) during a severe accident.

2.0 Arrangement

2.1 The functional arrangement of the IRWSTS is as shown in Figure 2.2.2-1—In-Containment Refueling Water Storage Tank System Functional Arrangement.

2.2 The location of the IRWSTS equipment is as listed in Table 2.2.2-1—IRWSTS Equipment Mechanical Design.

2.3 Physical separation exists between divisions of the IRWSTS.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.2-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

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3.2 ~~Piping indicated in Figure 2.2.2-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.3 Equipment identified as Seismic Category I in Table 2.2.2-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.2-1.

3.4 ~~Supports for piping shown as ASME Section III on Figure 2.2.2-1 will be designed in accordance with ASME Section III~~Deleted.

3.5 ~~Specifications exist for components listed as ASME Section III in Table 2.2.2-1~~Deleted.

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3.6 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.2-1~~Deleted.

3.7 ~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.2-1~~Deleted.

3.8 Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are designed in accordance with ASME Code Section III requirements.

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3.9 Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are installed in accordance with an ASME Code Section III Design Report.

3.10 Pressure boundary welds in portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are in accordance with ASME Code Section III.

3.11 Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 retain their pressure boundary integrity at their design pressure.

3.12 Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.2.2-2—IRWSTS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.2.2-2.

4.2 The IRWSTS equipment controls are provided in the MCR and the RSS as listed in Table 2.2.2-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~io~~r ~~and~~ control system (PACS) module in Table 2.2.2-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 IRWST has level indication.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.2.2-2 are powered from the Class 1E division as listed in Table 2.2.2-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.2.2-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.2.2 -2 for harsh environment can perform the function in Table 2.2.2-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 Class 1E valves listed in Table 2.2.2-2 can perform the function listed in Table 2.2.2-1 under system design conditions.

7.2 Containment isolation valves listed in Table 2.2.2-1 close within the containment isolation response time following initiation of a containment isolation signal.

7.3 The IRWST provides a required water volume.

7.4 Post-LOCA pH control is provided for the IRWST with trisodium phosphate (TSP).

Table 2.2.2-3—IRWSTS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ ITAAC (~~5~~ 78 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.2.2-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. ~~The components listed as~~Equipment identified in Table 2.2.2-1 as ASME Code Section III ~~in Table 2.2.2-1 have~~ has been ~~designed and~~ hydrostatically tested ~~in~~ per ~~accordance with~~ ASME Code Section III hydrostatic testing requirements.
3.2	Deleted.~~Piping indicated in Figure 2.2.2-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.2.2-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.2-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.2-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.2-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.2-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.2-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.2.2-3—IRWSTS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ ITAAC (~~5~~ 78 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.2.2-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.2.2-1 including anchorage is installed as specified on the construction drawings.
3.4	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.2-1 will be designed in accordance with ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.2-1 are designed in accordance with ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.2-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.2-1.~~
3.5	~~Specifications exist for components listed as ASME Section III in Table 2.2.2-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for components listed as ASME Section III in Table 2.2.2-1~~Deleted.
3.6	~~Specifications exist for piping shown as ASME Section III on Figure 2.2.2-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for piping identified as ASME Section III on Figure 2.2.2-1~~Deleted.
3.7	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.2-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.2-1.~~

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Table 2.2.2-3—IRWSTS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ ITAAC (~~5~~ 78 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.8	Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1.
3.9	Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.10	Pressure boundary welds in portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 has been performed in accordance with ASME Code Section III.
3.11	Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.12	Portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the IRWSTS piping shown as ASME Code Section III in Figure 2.2.2-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

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2.2.3 Safety Injection System and Residual Heat Removal System

1.0 Description

The safety injection system and residual heat removal system (SIS/RHRS) is a safety-related system. The SIS/RHRS has four divisions. The SIS/RHRS provides the following safety-related functions:

- Emergency core cooling.
- Residual heat removal.
- Reactor coolant pressure boundary integrity.
- Containment isolation.

2.0 Arrangement

2.1 The functional arrangement of the SIS/RHRS is as shown in Figure 2.2.3-1—Safety Injection System and Residual Heat Removal System Functional Arrangement.

2.2 The location of the SIS/RHRS equipment is as listed in Table 2.2.3-1—SIS/RHRS Equipment Mechanical Design.

2.3 Physical separation exists between portions of the divisions of the SIS/RHRS.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.3-1 as ASME Code Section III is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.2.3-1 will function as listed in Table 2.2.3-1.

3.3 ~~Piping indicated in Figure 2.2.3-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.2.3-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.3-1.

3.5 ~~Supports for piping shown as ASME Section III on Figure 2.2.3-1 will be designed in accordance with ASME Section III~~Deleted.

3.6 Components listed as ASME Code Class 1 in Table 2.2.3-1 will be analyzed for fatigue per ASME Section III Class 1.

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3.7 ~~Specifications exist for components listed as ASME Section III in Table 2.2.3-1~~Deleted.

3.8 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.3-1~~Deleted.

3.9 ~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.3-1~~Deleted.

3.10 Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are designed in accordance with ASME Code Section III requirements.

3.11 Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are installed in accordance with an ASME Code Section III Design Report.

3.12 Pressure boundary welds in portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are in accordance with ASME Code Section III.

3.13 Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 retain their pressure boundary integrity at their design pressure.

3.14 Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.2.3-2—SIS/RHRS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.2.3-2.

4.2 The SIS/RHRS equipment controls are provided in the MCR and the RSS as listed in Table 2.2.3-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~i~~o~~n~~r ~~and~~ control system (PACS) module in Table 2.2.3-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 The SIS/RHRS has the following system interlocks:

- Opening of the accumulator injection path.
- Opening authorization of the residual heat removal system suction path from the reactor coolant system.
- Opening authorization of the hot-leg safety injection path.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.2.3-2 are powered from the Class 1E division as listed in Table 2.2.3-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.2.3-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.2.3-2 for harsh environment can perform the function in Table 2.2.3-1 following exposure to the design basis environments for the time required.

Table 2.2.3-3—SIS/RHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 8 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.2.3-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. ~~The components listed as~~Equipment identified in Table 2.2.3-1 as ASME Code Section III ~~in Table 2.2.3-1 have~~ has been ~~designed and~~ hydrostatically tested ~~in accordance with~~ per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 2.2.3-1 will function as listed in Table 2.2.3-1.	Tests will be performed for the operation of the check valves listed in Table 2.2.3-1.	The check valves listed in Table 2.2.3-1 perform the functions listed in Table 2.2.3-1.
3.3	Deleted.~~Piping indicated in Figure 2.2.3-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.2.3-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.3-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.3-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.3-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.3-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.3-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.2.3-3—SIS/RHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 8 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.2.3-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. ~~The equipment designated as Seismic Category I in Table 2.2.3-1 can withstand a design basis seismic load without loss of function~~ Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.2.3-1 including anchorage is installed as specified on the construction drawings.
3.5	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.3-1 will be designed in accordance with ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.3-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.3-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.3-1.~~
3.6	Components listed as ASME Code Class 1 in Table 2.2.3-1 will be analyzed for fatigue per ASME Section III Class 1.	An analysis will be performed.	a. Fatigue analysis has been performed for components listed as ASME Code Class 1 in Table 2.2.3-1. ~~c~~b. For components listed as ASME Code Class 1 in Table 2.2.3-1 operating modes where peak stresses are within 10% of allowable have been identified.

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Table 2.2.3-3—SIS/RHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 8 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.7	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.2.3-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.2.3-1~~.
3.8	Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.2.3-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III on Figure 2.2.3-1~~.
3.9	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.3-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.3-1.~~
3.10	Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1.
3.11	Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.12	Pressure boundary welds in portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 has been performed in accordance with ASME Code Section III.

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Table 2.2.3-3—SIS/RHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 8 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.13	Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.14	Portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the SIS/RHRS piping shown as ASME Code Section III in Figure 2.2.3-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and the RSS as identified in Table 2.2.3-2.	Inspections will be performed for the existence or retrievability of the displays in the MCR or the RSS as listed in Table 2.2.3-2.	a. The displays listed in Table 2.2.3-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.2.3-2 as being retrieved in the RSS can be retrieved in the RSS.
4.2	Controls exist in the MCR and the RSS as identified in Table 2.2.3-2.	Tests will be performed for the existence of control signals from the MCR and the RSS to the equipment listed in Table 2.2.3-2.	a. The controls listed in Table 2.2.3-2 as being in the MCR exist in the MCR. b. The controls listed in Table 2.2.3-2 as being in the RSS exist in the RSS.
4.3	~~Actuators~~ Equipment listed as being controlled by a PACS module in Table 2.2.3-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.	A~~n operational~~ test will be performed using test signals ~~for the actuators being controlled by a PACS module as listed in Table 2.2.3-2. An inspection will be performed on the actuation of the actuator~~.	~~The actuators~~Equipment listed as being controlled by a PACS module in Table 2.2.3-2 ~~actuate~~ responds to the state requested by the signal.

2.2.4 Emergency Feedwater System

1.0 Description

The emergency feedwater system (EFWS) is a safety-related system. The EFWS has four divisions. The EFWS provides the following safety-related functions:

- Restoration and maintaining of the steam generator (SG) water inventory in the unaffected SGs.
- Manual EFW isolation.
- Automatic closure of the SG isolation valve and the SG level control valve.
- Containment isolation.

2.0 Arrangement

2.1 The functional arrangement of the EFWS is as shown in Figure 2.2.4-1—Emergency Feedwater System Functional Arrangement.

2.2 The location of the EFWS equipment is as listed in Table 2.2.4-1—EFWS Equipment Mechanical Design.

2.3 Physical separation exists between divisions of the EFWS.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.4-1 as ASME Code Section III is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.2.4-1 will function as listed in Table 2.2.4-1.

3.3 ~~Piping indicated in Figure 2.2.4-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.2.4-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.4-1.

3.5 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.4-1 will be designed in accordance with ASME Section III.~~

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3.6 ~~Specifications exist for components listed as ASME Section III in Table 2.2.4-1~~Deleted.

3.7 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.4-1~~Deleted.

3.8 Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.4-1.~~

3.9 Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are designed in accordance with ASME Code Section III requirements.

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3.10 Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are in accordance with ASME Code Section III.

3.12 Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 retain their pressure boundary integrity at their design pressure.

3.13 Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.2.4-2—EFWS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.2.4-2.

4.2 The EFWS equipment controls are provided in the MCR and the RSS as listed in Table 2.2.4-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~i~~on~~r~~ ~~and~~ control system (PACS) module in Table 2.2.4-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.2.4-2 are powered from the Class 1E division as listed in Table 2.2.4-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.2.4-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.2.4-2 for harsh environment can perform the function in Table 2.2.4-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 The pumps listed in Table 2.2.4-1 have sufficient net positive suction head available (NPSHA).

7.2 The EFWS delivers water to the SG at the required flow rate to restore and maintain SG water level and remove decay heat following the loss of normal feedwater supply due to design basis events.

7.3 The EFWS combined storage pool volume is sufficient to achieve a cold shutdown condition for design basis events.

7.4 The EFWS provides a maximum flow rate to a depressurized steam generator.

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Table 2.2.4-3—EFWS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.3	Deleted.~~Piping indicated in Figure 2.2.4-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.a. ~~Analysis of the as-designed piping identified in Figure 2.2.4-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.4-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.4-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.a. ~~ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.4-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.4-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.4-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~
~~3.3a~~	~~The piping identified as being within the ASME Code Section III boundary as indicated in Figure 2.2.4-1 has been designed in accordance with ASME Code Section III requirements including seismic loads.~~	~~Analysis of the as-designed piping will be performed in accordance with ASME Code Section III requirements for the piping indicated in Figure 2.2.4-1.~~	~~The as-designed piping identified as ASME Code Section III in Figure 2.2.4-1 meets ASME Code Section III design requirements.~~

Table 2.2.4-3—EFWS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.5	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.4-1 will be designed in accordance with ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.4-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.4-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.4-1.~~
3.6	~~Specifications exist for components listed as ASME Section III in Table 2.2.4-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for components listed as ASME Section III in Table 2.2.4-1~~Deleted.
3.7	~~Specifications exist for piping shown as ASME Section III on Figure 2.2.4-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for piping identified as ASME Section III on Figure 2.2.4-1~~Deleted.
3.8	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.4-1~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.4-1~~
3.9	Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1.

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Table 2.2.4-3—EFWS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.10	Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.11	Pressure boundary welds in portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 has been performed in accordance with ASME Code Section III.
3.12	Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	Portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the EFWS piping shown as ASME Code Section III in Figure 2.2.4-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and the RSS as identified in Table 2.2.4-2.	Inspections will be performed for the existence or retrievability of the displays in the MCR or the RSS as listed in Table 2.2.4-2.	a. The displays listed in Table 2.2.4-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.2.4-2 as being retrieved in the RSS can be retrieved in the RSS.

2.2.5 Fuel Pool Cooling and Purification System

1.0 Description

The fuel pool cooling and purification system (FPCPS) is made up of the following two separate subsystems:

- fuel pool cooling system (FPCS)
- fuel pool purification system (FPPS)

The FPCS is a safety-related system with two divisions. The FPCS provides the safety-related function of removing decay heat from the spent fuel pool.

The FPPS is a non-safety-related system that provides the following safety-related functions:

- Provides containment isolation.
- Provides SFP makeup water.

2.0 Arrangement

2.1 The functional arrangement of the FPCPS is as shown in Figure 2.2.5-1—Fuel Pool Cooling and Purification System Functional Arrangement.

2.2 The location of the FPCPS equipment is as listed in Table 2.2.5-1—FPCPS Equipment Mechanical Design.

2.3 ~~Physical separation exists between divisions of T~~the FPCPS divisions are physically separated from each other in the Fuel Building.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.5-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.2.5-1 will function as listed in Table 2.2.5-1.

3.3 ~~Piping indicated in Figure 2.2.5-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.2.5-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.5-1.

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3.5 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.5-1 will be designed in accordance with ASME Section III.~~

3.6 ~~Specifications exist for components listed as ASME Section III in Table 2.2.5-1~~Deleted.

3.7 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.5-1~~Deleted.

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3.8 Deleted. ~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.5-1.~~

3.9 Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are designed in accordance with ASME Code Section III requirements.

3.10 Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are in accordance with ASME Code Section III.

3.12 Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 retain their pressure boundary integrity at their design pressure.

3.13 Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are installed in accordance with ASME Code Section III requirements.

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4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.2.5-2—FPCPS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.2.5-2.

4.2 The FPCPS equipment controls are provided in the MCR and the RSS as listed in Table 2.2.5-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~i~~or ~~and~~ control system (PACS) module in Table 2.2.5-2 responds to the state requested by a test signal ~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.2.5-2 are powered from the Class 1E division as listed in Table 2.2.5-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.2.5-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.2.5-2 for harsh environment can perform the function in Table 2.2.5-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 The fuel pool cooling system heat exchangers listed in Table 2.2.5-1 each have the capacity to transfer the design heat load to the component cooling water system.

7.2 The pumps listed in Table 2.2.5-1 have sufficient net positive suction head available (NPSHA).

Table 2.2.5-3—FPCPS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.2.5-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. ~~The components listed~~Equipment identified in Table 2.2.5-1 as ASME Code Section III ~~in Table 2.2.5-1 have~~ has been ~~designed and~~ hydrostatically tested ~~in accordance with~~per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 2.2.5-1 will function as listed in Table 2.2.5-1.	Tests will be performed for the operation of the check valves listed in Table 2.2.5-1.	The check valves listed in Table 2.2.5-1 perform the functions listed in Table 2.2.5-1.
3.3	Deleted.~~Piping indicated in Figure 2.2.5-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.2.5-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.5-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.5-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.5-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.5-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.5-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.2.5-3—FPCPS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.2.5-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. ~~The equipment designated as Seismic Category I in Table 2.2.5-1 can with stand a design basis seismic load without loss of function~~Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.2.5-1 including anchorage is installed as specified on the construction drawings.
3.5	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.5-1 will be designed per ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.5-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.5-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.5-1.~~
3.6	~~Specifications exist for components listed as ASME Section III in Table 2.2.5-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for components listed as ASME Section III in Table 2.2.5-1~~Deleted.
3.7	~~Specifications exist for piping shown as ASME Section III on Figure 2.2.5-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for piping identified as ASME Section III on Figure 2.2.5-1~~Deleted.
3.8	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.5-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.5-1.~~

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Table 2.2.5-3—FPCPS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.9	Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1.
3.10	Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.11	Pressure boundary welds in portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 has been performed in accordance with ASME Code Section III.
3.12	Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	Portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the FPCPS piping shown as ASME Code Section III in Figure 2.2.5-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

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2.2.6 Chemical and Volume Control System

1.0 Description

The chemical and volume control system (CVCS) is a non-safety-related system that provides some safety related functions. The CVCS provides the following safety-related functions:

- Reactivity control.
- Reactor coolant pressure boundary integrity.
- Containment isolation.
- Charging flow isolation.

The CVCS provides the following non-safety-related functions:

- Pressurizer auxiliary spray.
- Reactor coolant pump seal water.
- Reactor coolant chemistry control.

2.0 Arrangement

2.1 The functional arrangement of the CVCS is as shown in Figure 2.2.6-1—Chemical and Volume Control System Functional Arrangement.

2.2 The location of the CVCS equipment is as listed in Table 2.2.6-1—CVCS Equipment Mechanical Design.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.6-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.2.6-1 will function as listed in Table 2.2.6-1.

3.3 ~~Piping indicated in Figure 2.2.6-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.2.6-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.6-1.

3.5 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.6-1 will be designed in accordance with ASME Section III.~~

3.6 Components listed as ASME Code Class ~~I~~ 1 in Table 2.2.6-1 will be analyzed for fatigue in accordance with ASME Section III Class 1.

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3.7 ~~Specifications exist for components listed as ASME Section III in Table 2.2.6-1~~Deleted.

3.8 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.6-1~~Deleted.

3.9 Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.6-1.~~

3.10 Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are designed in accordance with ASME Code Section III requirements.

3.11 Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are installed in accordance with an ASME Code Section III Design Report.

3.12 Pressure boundary welds in portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are in accordance with ASME Code Section III.

3.13 Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 retain their pressure boundary integrity at their design pressure.

3.14 Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.2.6-2—CVCS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.2.6-2.

4.2 The CVCS equipment controls are provided in the MCR and the RSS as listed in Table 2.2.6-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~i~~o~~n~~r ~~and~~ control system (PACS) module in Table 2.2.6-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 The CVCS has the following system interlocks:

- Isolation of the charging pump suction from the volume control tank and normal letdown path during a boron dilution event by closure of valves 30KBA21AA001, 30KBA21AA009, and 30KBA25AA017.
- Isolation of the charging line by closure of valves 30KBA34AA002, 30KBA34AA012, and 30KBA35AA001.
- Isolation of the letdown line on a safety injection actuation signal by closure of valves 30KBA10AA001 and 30KBA10AA002.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.2.6-2 are powered from the Class 1E division as listed in Table 2.2.6-2 in a normal or alternate feed condition.

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Table 2.2.6-3—CVCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 7 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.3	Deleted.~~Piping indicated in Figure 2.2.6-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.2.6-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.6-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.6-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.6-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.6-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.6-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~
~~3.3a~~	~~The piping identified as being within the ASME Code Section III boundary as indicated in Figure 2.2.6-1 has been designed in accordance with ASME Code Section III requirements including seismic loads.~~	~~Analysis of the as-designed piping will be performed in accordance with ASME Code Section III requirements for the piping indicated in Figure 2.2.6-1.~~	~~The as-designed piping identified as ASME Code Section III in Figure 2.2.6-1 meets ASME Code Section III design requirements.~~

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Table 2.2.6-3—CVCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 7 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.5	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.6-1 will be designed per ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.6-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.6-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.6-1.~~
3.6	Components listed as ASME Code Class ~~I~~1 in Table 2.2.6-1 will be analyzed for fatigue per ASME Section III Class 1.	An analysis will be performed.	a. Fatigue analysis has been performed for components listed as ASME Code Class ~~I~~1 in Table 2.2.6-1. ~~a.~~b. For components listed as ASME Code Class ~~I~~1 in Table 2.2.6-1, operating modes where peak stresses are within ~~10%~~ten percent of allowable have been identified.
3.7	~~Specifications exist for components listed as ASME Section III in Table 2.2.6-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for components listed as ASME Section III in Table 2.2.6-1~~Deleted.
3.8	~~Specifications exist for piping shown as ASME Section III on Figure 2.2.6-1~~Deleted.	~~An inspection will be performed~~Deleted.	~~Specifications exist for piping identified as ASME Section III on Figure 2.2.6-1~~Deleted.
3.9	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.6-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.6-1.~~

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Table 2.2.6-3—CVCS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~6~~ 7 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.10	Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1.
3.11	Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.12	Pressure boundary welds in portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 has been performed in accordance with ASME Code Section III.
3.13	Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.14	Portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the CVCS piping shown as ASME Code Section III in Figure 2.2.6-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

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2.2.7 Extra Borating System

1.0 Description

The extra borating system (EBS) is a safety-related system. The EBS has two divisions. The EBS provides the following safety related functions:

- Core reactivity control.
- Reactor coolant pressure boundary integrity.
- Containment isolation.

The EBS provides the following non-safety related functions:

- Borated water to the RCS for beyond design basis events.

2.0 Arrangement

2.1 The functional arrangement of the EBS is as shown in Figure 2.2.7-1—Extra Borating System Functional Arrangement.

2.2 The location of the EBS equipment is as listed in Table 2.2.7-1—EBS Equipment Mechanical Design.

2.3 ~~Physical separation exists between divisions of the EBS~~The divisions of the EBS, except for the suction piping interconnect, are separated by a wall in the Fuel Building.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.2.7-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.2.7-1 will function as listed in Table 2.2.7-1.

3.3 ~~Piping indicated in Figure 2.2.7-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.2.7-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.2.7-1.

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3.5 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.7-1 will be designed per ASME Section III.~~

3.6 Components listed as ASME Code Class 1 in Table 2.2.7-1 will be analyzed for fatigue in accordance with ASME Section III Class 1.

3.7 ~~Specifications exist for components listed as ASME Section III in Table 2.2.7-1~~Deleted.

3.8 ~~Specifications exist for piping shown as ASME Section III on Figure 2.2.7-1~~Deleted.

3.9 Deleted. ~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.7-1.~~

3.10 Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are designed in accordance with ASME Code Section III requirements.

3.11 Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are installed in accordance with an ASME Code Section III Design Report.

3.12 Pressure boundary welds in portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are in accordance with ASME Code Section III.

3.13 Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 retain their pressure boundary integrity at their design pressure.

3.14 Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.2.7-2—EBS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.2.7-2.

4.2 The EBS equipment controls are provided in the MCR and the RSS as listed in Table 2.2.7-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~i~~or ~~and~~ control system (PACS) module in Table 2.2.7-2 responds to the state requested by a test signal ~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.2.7-2 are powered from the Class 1E division as listed in Table 2.2.7-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.2.7-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.2.7-2 for harsh environment can perform the function in Table 2.2.7-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 The pumps listed in Table 2.2.7-1 have sufficient net positive suction head available (NPSHA).

7.2 Class 1E valves listed in Table 2.2.7-2 can perform the function listed in Table 2.2.7-1 under system design conditions.

7.3 The EBS provides for flow testing of the EBS pumps during plant operation.

Table 2.2.7-3—EBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.2.7-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. ~~The components listed~~Equipment identified in Table 2.2.7-1 as ASME Code Section III ~~in Table 2.2.7-1 have~~has been ~~designed and~~ hydrostatically tested ~~in accordance with~~per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 2.2.7-1 will function as listed in Table 2.2.7-1.	Tests will be performed for the operation of the check valves listed in Table 2.2.7-1.	The check valves listed in Table 2.2.7-1 perform the functions listed in Table 2.2.7-1.
3.3	Deleted.~~Piping indicated in Figure 2.2.7-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.2.7-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.2.7-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.2.7-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.2.7-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.2.7-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.2.7-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.2.7-3—EBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.2.7-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. ~~The equipment designated as Seismic Category I in Table 2.2.7-1 can withstand a design basis seismic load without loss of function~~Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.2.7-1 including anchorage is installed as specified on the construction drawings.
3.5	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.7-1 will be designed in accordance with ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.2.7-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.2.7-1.~~ ~~c. Support mass is less than 10% of the adjacent pipe span for piping shown as ASME Section III on Figure 2.2.7-1.~~
3.6	Components listed as ASME Code Class 1 in Table 2.2.7-1 will be analyzed for fatigue per ASME Section III Class 1.	An analysis will be performed.	a. Fatigue analysis has been performed for components listed as ASME Code Class 1 in Table 2.2.7-1. b. For components listed as ASME Code Class 1 in Table 2.2.7-1 operating modes where peak stresses are within 10% of allowable have been identified.

Table 2.2.7-3—EBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.7	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.2.7-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.2.7-1~~.
3.8	Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.2.7-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III on Figure 2.2.7-1~~.
3.9	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.7-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.2.7-1.~~
3.10	Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1.
3.11	Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.12	Pressure boundary welds in portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 has been performed in accordance with ASME Code Section III.

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Table 2.2.7-3—EBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.13	Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.14	Portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the EBS piping shown as ASME Code Section III in Figure 2.2.7-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and the RSS as identified in Table 2.2.7-2.	Inspections will be performed for the existence or retrievability of the displays in the MCR or the RSS as listed in Table 2.2.7-2.	a. The displays listed in Table 2.2.7-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.2.7-2 as being retrieved in the RSS can be retrieved in the RSS.
4.2	Controls exist in the MCR and the RSS as identified in Table 2.2.7-2.	Tests will be performed for the existence of control signals from the MCR and the RSS to the equipment listed in Table 2.2.7-2.	a. The controls listed in Table 2.2.7-2 as being in the MCR exist in the MCR. b. The controls listed in Table 2.2.7-2 as being in the RSS exist in the RSS.
4.3	~~Actuators~~ Equipment listed as being controlled by a PACS module in Table 2.2.7-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.	A~~n operational~~ test will be performed using test signals ~~for the actuators being controlled by a PACS module as listed in Table 2.2.7-2. An inspection will be performed on the actuation of the actuator~~.	~~The actuators~~Equipment listed as being controlled by a PACS module in Table 2.2.7-2 ~~actuate~~ responds to the state requested by the test signal.

2.3.3 Severe Accident Heat Removal System

1.0 Description

The severe accident heat removal system (SAHRS) is a dedicated cooling water system for the primary containment to support mitigation of beyond design basis events (BDBEs). The system does not operate during normal plant operations or design basis accidents.

The SAHRS provides the following safety related functions:

- Containment isolation.

The SAHRS provides the following non-safety related functions:

- Passive cooling of the core melt stabilization system (CMSS).
- Active spray for environmental control of the containment atmosphere.
- Active recirculation cooling of the CMSS and containment.

2.0 Arrangement

2.1 The functional arrangement of the SAHRS is as shown in Figure 2.3.3-1—SAHRS Functional Arrangement.

2.2 The location of the SAHRS equipment is as listed in Table 2.3.3-1—SAHRS Equipment Mechanical Design.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.3.3-1 as ASME ~~Boiler and Pressure Vessel (BPV)~~ Code Section III is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME ~~BPV~~ Code Section III.

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3.2 Check valves listed in Table 2.3.3-1 will function as listed in Table 2.3.3-1.

3.3 ~~Piping indicated in Figure 2.3.3-1 as ASME BPV Code Section III is designed, welded and tested in accordance with ASME BPV Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.3.3-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.3.3-1.

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3.5 Deleted.~~Supports for piping shown as ASME BPV Code Section III on Figure 2.3.3-1 will be designed per ASME BPV Code Section III.~~

3.6 ~~Specifications exist for components listed as ASME BPV Code Section III in Table 2.3.3-1~~Deleted.

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3.7 ~~Specifications exist for piping shown as ASME BPV Code Section III on Figure 2.3.3-1~~Deleted.

3.8 Deleted.~~Specifications exist for supports for piping shown as ASME BPV Code Section III on Figure 2.3.3-1.~~

3.9 Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are designed in accordance with ASME Code Section III requirements.

3.10 Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are in accordance with ASME Code Section III.

3.12 Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 retain their pressure boundary integrity at their design pressure.

3.13 Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are installed in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Displays and Controls

4.1 The SAHRS equipment controls are provided in the MCR as listed in Table 2.3.3-2—SAHRS Equipment I&C and Electrical Design.

4.2 ~~Actuators~~ Equipment listed as being controlled by a ~~P~~priority ~~Actuation~~ and actuator ~~and Control~~ control ~~System~~ system (PACS) module in Table 2.3.3-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.3.3-2 are powered from the Class 1E division as listed in Table 2.3.3-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.3.3-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.3.3-2 for harsh environment can perform the function in Table 2.3.3-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 The SAHRS heat exchanger as listed in Table 2.3.3-1 has the capacity to transfer the design heat load to the component cooling water system (CCWS).

7.2 Class 1E valves listed in Table 2.3.3-2 perform the functions listed in Table 2.3.3-1 under system design conditions.

7.3 Containment isolation valves listed in Table 2.3.3-1 close within the containment isolation response time following initiation of a containment isolation signal.

Table 2.3.3-3—SAHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (5 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.2	Check valves listed in Table 2.3.3-1 will function as listed in Table 2.3.3-1.	Tests will be performed for the operation of the check valves listed in Table 2.3.3-1.	The check valves listed in Table 2.3.3-1 perform the functions listed in Table 2.3.3-1.
3.3~~a~~	Deleted.~~The piping identified as being within the ASME BPV Code Section III boundary as indicated in Figure 2.3.3-1 has been designed in accordance with ASME BPV Code Section III requirements including seismic loads~~.	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.3.3-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.3.3-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements~~. ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.3.3-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME BPV Code Section III stress reports exist and conclude that the as-designed piping identified as ASME BPV Code Section III in Figure 2.3.3-1 meets ASME BPV Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.3.3-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.3.3-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.3.3-3—SAHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (5 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.5	Deleted.~~Supports for piping shown as ASME BPV Code Section III on Figure 2.3.3-1 will be designed per ASME BPV Code Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME BPV Code Section III on Figure 2.3.3-1 are designed to ASME BPV Code Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME BPV Code Section III on Figure 2.3.3-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME BPV Code Section III on Figure 2.3.3-1.~~
3.6	Deleted~~Specifications exist for components listed as ASME BPV Code Section III in Table 2.3.3-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME BPV Code Section III in Table 2.3.3-1~~.
3.7	Deleted~~Specifications exist for piping shown as ASME BPV Code Section III on Figure 2.3.3-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME BPV Code Section III on Figure 2.3.3-1~~.
3.8	Deleted.~~Specifications exist for supports for piping shown as ASME BPV Code Section III on Figure 2.3.3-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME BPV Code Section III on Figure 2.3.3-1.~~
3.9	Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1.

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Table 2.3.3-3—SAHRS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (5 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.10	Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.11	Pressure boundary welds in portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 has been performed in accordance with ASME Code Section III.
3.12	Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	Portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the SAHRS piping shown as ASME Code Section III in Figure 2.3.3-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Controls exist in the MCR as identified in Table 2.3.3-2.	Tests will be performed for the existence of control signals from the MCR to the equipment listed in Table 2.3.3-2.	The controls listed in Table 2.3.3-2 as being in the MCR exist in the MCR.

2.5.4 Emergency Diesel Generator

1.0 Description

The emergency diesel generators (EDG) provide a standby source of Class 1E power to safety-related and non-safety-related loads during conditions that result in a loss of preferred power to emergency power supply system (EPSS) buses.

2.0 Arrangement

2.1 The functional arrangement of the EDG fuel oil storage and transfer system is as shown in Figure 2.5.4-1— Emergency Diesel Generator Fuel Oil Storage and Transfer System Functional Arrangement.

2.2 EDGs and their respective support systems are located as listed in Table 2.5.4-1— Emergency Diesel Generator Equipment Mechanical Design.

2.3 ~~There are four independent EDGs.~~Deleted.

2.4 The functional arrangement of the EDG lubricating oil system is as shown in Figure 2.5.4-2—Emergency Diesel Generator Lubricating Oil System Functional Arrangement.

2.5 The functional arrangement of the EDG air intake and exhaust system is as shown in Figure 2.5.4-3—Emergency Diesel Generator Air Intake and Exhaust System Functional Arrangement.

2.6 The functional arrangement of the EDG cooling water system is as shown in Figure 2.5.4-4—Emergency Diesel Generator Cooling Water System Functional Arrangement.

2.7 The functional arrangement of the EDG starting air system is as shown in Figure 2.5.4-5—Emergency Diesel Generator Starting Air System Functional Arrangement.

3.0 Mechanical Design Features, Electrical and Seismic Classifications

3.1 Equipment listed in Table 2.5.4-1 as ASME Code Section III ~~are~~ is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME Code Section III.

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3.2 ~~Piping indicated in Figure 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III is designed and tested in accordance with ASME Code Section III~~Deleted.

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3.3 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 will be designed per ASME Section III.~~

3.4 Deleted~~Specifications exist for components listed as ASME Section III in Table 2.5.4-1~~.

3.5 Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.5.4-1, Figure 2.5.4-2 and Figure 2.5.4-3~~.

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3.6 Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5.~~

3.7 Equipment identified as Seismic Category I in Table 2.5.4-1 can withstand seismic design basis ~~seismic~~ loads without loss of safety function.

3.8 ~~Equipment listed as Class 1E in Table 2.5.4-2 are qualified as Seismic Category I and can withstand seismic design basis loads without loss of safety function~~Deleted.

3.9 Each EDG has a fuel oil storage tank.

3.10 Each EDG has a fuel oil day tank.

3.11 Each fuel oil transfer pump capacity is greater than EDG fuel oil consumption at the continuous rating.

3.12 Each EDG starting air system is capable of providing air to start the respective EDG without being recharged.

3.13 Check valves listed in Table 2.5.4-1 will function as listed in Table 2.5.4-1.

3.14 Each EDG lubricating oil system provides lubrication to the engine and turbocharger wearing parts during engine operation.

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3.15 Each EDG exhaust path has a bypass exhaust path.

3.16 Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are designed in accordance with ASME Code Section III requirements.

3.17 Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are installed in accordance with an ASME Code Section III Design Report.

3.18 Pressure boundary welds in portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are in accordance with ASME Code Section III.

3.19 Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 retain their pressure boundary integrity at their design pressure.

3.20 Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are installed in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Alarms, Displays and Controls

4.1 Displays listed in Table 2.5.4-2 and Table 2.5.4-3 are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.5.4-2 and Table 2.5.4-3.

Table 2.5.4-34—Emergency Diesel Generator ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(4 ~~6~~89 Sheets)

Commitment Wording		Inspections, Tests ~~or~~, ~~Analysis~~ Analyses	Acceptance Criteria
		b. ~~An i~~Inspections will be conducted on the equipment identified in Table 2.5.4-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~performed.~~	b. Equipment identified in Table 2.5.4-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.
		c. Hydrostatic testing of the equipment identified in Table 2.5.4-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing ~~requirements.~~	c. Equipment identified in Table 2.5.4-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing ~~requirements.~~
3.2	Deleted.~~Piping indicated in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~

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Table 2.5.4-34—Emergency Diesel Generator ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(4 ~~6~~89 Sheets)

	Commitment Wording	Inspections, Tests ~~or~~, ~~Analysis~~ Analyses	Acceptance Criteria
		~~c. Hydrostatic testing of the as-built piping identified in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	~~c. As-built piping identified in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~
3.3	Deleted.~~Supports for piping shown as ASME Section III on f~~Figure 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 ~~will be designed per ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Fatigue analysis has been performed for components listed as ASME Code Class I in Table 2.5.4-1.~~ ~~a. Supports for piping shown as ASME Section III on Figures 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figures 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figures 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5.~~
3.4	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.5.4-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.5.4-1~~.

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Table 2.5.4-34—Emergency Diesel Generator ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(4 ~~6~~89 Sheets)

	Commitment Wording	Inspections, Tests ~~or~~, ~~Analysis~~ Analyses	Acceptance Criteria
3.5	Deleted~~Specifications exist for piping shown as ASME Section III on fFigure 2.5.4-1, Figure 2.5.4-2 and Figure 2.5.4-3~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III on Figure 2.5.4-1, Figure 2.5.4-2 and Figure 2.5.4-3~~.
3.6	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on fFigure 2.5.4-1, Figure 2.5.4-2, and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.5.4-1, Figure 2.5.4-2 and Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5.~~
3.7	Equipment identified as Seismic Category I in Table 2.5.4-1 can withstand seismic~~a~~ design basis ~~seismic~~ loads without loss of safety function.	a. Type tests, ~~tests,~~ analyses or a combination of type tests and analyses will be performed on the equipment listed as Seismic Category I in Table 2.5.4-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements. b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.5.4-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	a. Tests/analysis ~~A~~ reports exist~~s~~ and conclude~~s~~ that the Seismic Category I equipment ~~designated as Seismic Category I~~listed in Table 2.5.4-1 can withstand ~~a design basis~~ seismic design basis loads without loss of safety function. b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.5.4-1 including anchorage is installed as specified on the construction drawings.
3.8	~~Equipment listed as Class 1E in Table 2.5.4-2 are qualified as Seismic Category I and can withstand seismic design basis loads without loss of safety function.~~Deleted.	~~a. An inspection will be performed.~~ ~~b. Type testing, analysis, or a combination of type testing and analysis will be performed.~~Deleted.	~~a. A report exists and concludes that the equipment designated as Class 1E in Table 2.5.4-2 is installed as designed.~~ ~~b. A report exists and concludes that the equipment listed as Class 1E in Table 2.5.4-2 can withstand seismic design basis loads without loss of safety function.~~Deleted.

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Table 2.5.4-~~3~~4—Emergency Diesel Generator ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ ~~6~~89 Sheets)

Commitment Wording		Inspections, Tests ~~or~~, ~~Analysis~~ Analyses	Acceptance Criteria
3.15	Each EDG exhaust path has a bypass exhaust path.	Analysis, tests, type tests or a combination of analysis, test and type tests will be performed on the EDG exhaust bypass device.	Each EDG exhaust path bypass device provides an exhaust path when actuated.
3.16	Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5.
3.17	Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.18	Pressure boundary welds in portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 has been performed in accordance with ASME Code Section III.

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Table 2.5.4-~~3~~4—Emergency Diesel Generator ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ ~~6~~89 Sheets)

	Commitment Wording	Inspections, Tests ~~or~~, ~~Analysis~~ Analyses	Acceptance Criteria
3.19	Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.20	Portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the EDG piping shown as ASME Code Section III in Figure 2.5.4-1, Figure 2.5.4-2, Figure 2.5.4-3, Figure 2.5.4-4, and Figure 2.5.4-5, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays listed in Table 2.5.4-2 and Table 2.5.4-3 are retrievable in the MCR and RSS as listed in Table 2.5.4-2.	An inspection will be performed.	a. Displays listed in Table 2.5.4-2 and Table 2.5.4-3 as being retrievable in the MCR can be retrieved in the MCR. b. Displays listed in Table 2.5.4-2 and Table 2.5.4-3 as being retrievable in the RSS can be retrieved in the RSS.
4.2	EDG equipment controls are provided in the MCR and RSS as listed in Table 2.5.4-2 and Table 2.5.4-3.	A test will be performed.	a. Controls listed in Table 2.5.4-2 and Table 2.5.4-3 as being in the MCR exist in the MCR. b. Controls listed in Table 2.5.4-2 and Table 2.5.4-3 as being in the RSS exist in the RSS.
4.3	Equipment listed as being controlled by a PACS module in Table 2.5.4-2 responds to the state requested by a test signal.	A test will be performed using test signals.	Equipment listed as being controlled by a PACS module in Table 2.5.4-2 responds to the state requested by the signal.

3.2 Check valves will function as listed in Table 2.7.1-1.

3.3 ~~Piping indicated in Figure 2.7.1-1 as ASME Code Section III is designed and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.7.1-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.7.1-1.

3.5 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.7.1-1 will be designed per ASME Section III.~~

3.6 ~~Specifications exist for components listed as ASME Section III in Table 2.7.1-1~~Deleted.

3.7 ~~Specifications exist for piping shown as ASME Section III on Figure 2.7.1-1~~Deleted.

3.8 Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.7.1-1.~~

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3.9 Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are designed in accordance with ASME Code Section III requirements.

3.10 Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are in accordance with ASME Code Section III.

3.12 Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 retain their pressure boundary integrity at their design pressure.

3.13 Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are installed in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Displays and Controls

4.1 Displays listed in Table 2.7.1-2—Component Cooling Water System Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.7.1-2.

4.2 The CCWS equipment controls are provided in the MCR and the RSS as listed in Table 2.7.1-~~1~~2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuator~~ion and~~ control system (PACS) module in Table 2.7.1-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 A CCWS low flow condition ~~auto~~ automatically opens the low head safety injection (LHSI)/residual ~~head~~heat removal (RHR) heat exchanger (HX) ~~outlet~~inlet valve.

4.5 A surge tank level of MIN3 ~~will auto~~automatically isolates the associated train common header switchover valves.

Table 2.7.1-3—Component Cooling Water System ITAAC ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ (7 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.7.1-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. Equipment identified in Table 2.7.1-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 2.7.1-1 will function as listed in Table 2.7.1-1.	Tests will be performed for the operation of the check valves listed in Table 2.7.1-1.	The check valves listed in Table 2.7.1-1 perform the functions listed in Table 2.7.1-1.
3.3	Deleted.~~Piping indicated in Figure 2.7.1-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.7.1-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.7.1-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.7.1-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.7.1-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.7.1-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.7.1-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.7.1-3—Component Cooling Water System ITAAC ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ (7 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.7.1-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.7.1-1 including anchorage is installed as specified on the construction drawings.
3.5	Deleted.~~Supports for piping shown as ASME Section III in Figure 2.7.1-1 will be designed per in accordance with ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III in Figure 2.7.1-1 are designed to in accordance with ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III in Figure 2.7.1-1.~~ ~~Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III in Figure 2.7.1-1 .~~
3.6	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.1-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.1-1~~.
3.7	Deleted~~Specifications exist for piping shown as ASME Section III in Figure 2.7.1-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III in Figure 2.7.1-1~~.
3.8	Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.1-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.1-1.~~

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Table 2.7.1-3—Component Cooling Water System ITAAC ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ (7 Sheets)

Commitment Wording		Inspections, Tests, ~~or~~ ~~Analysis~~Analyses	Acceptance Criteria
3.9	Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1.
3.10	Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.11	Pressure boundary welds in portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 has been performed in accordance with ASME Code Section III.
3.12	Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	Portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the CCWS piping shown as ASME Code Section III in Figure 2.7.1-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

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2.7.2 Safety Chilled Water System

1.0 Description

The safety chilled water system (SCWS) is a safety-related system that delivers refrigerated chilled water to the safety-related heating, ventilation, air conditioning (HVAC) systems and to Division 1 and Division 4 low head safety injection (LHSI) motor cooler and pump sealing cooler.

The SCWS significant safety-related function is to provide chilled water as a heat sink to safety-related HVAC systems, the main control room (MCR) habitability, and cooling of the LHSI pump seal coolers and motor coolers in Division 1 and Division 4 in the event of a design basis accident.

The SCWS significant non-safety-related function is for Division 1 and Division 4 to function in the event of a station blackout (SBO) or loss of ultimate heat sink (LUHS).

2.0 Arrangement

2.1 The functional arrangement of the SCWS is as shown in Figure 2.7.2-1—Safety Chilled Water System Functional Arrangement.

2.2 The location of the SCWS equipment is as listed in Table 2.7.2-1—Safety Chilled Water System Equipment Mechanical Design.

2.3 Physical separation exists between divisions of the SCWS.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.7.2-1 as ASME Code Section III is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.7.2-1 will function as listed in Table 2.7.2-1.

3.3 ~~Piping indicated in Figure 2.7.2-1 as ASME Code Section III is designed and tested in accordance with ASME Code Section III.~~Deleted.

3.4 Equipment identified as seismic Category I in Table 2.7.2-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.7.2-1.

3.5 Deleted.~~Supports for piping shown as ASME Section III in Figure 2.7.2-1 will be designed per ASME Section III.~~

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3.6 Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.2-1~~.

3.7 Deleted~~Specifications exist for piping shown as ASME Section III in Figure 2.7.2-1~~.

3.8 Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.2-1.~~

3.9 Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are designed in accordance with ASME Code Section III requirements.

3.10 Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are in accordance with ASME Code Section III.

3.12 Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 retain their pressure boundary integrity at their design pressure.

3.13 Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are installed in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Displays and Controls

4.1 Displays listed in Table 2.7.2-2—Safety Chilled Water System Equipment I&C and Electrical Design are retrievable in the MCR and the remote shutdown station (RSS) as listed in Table 2.7.2-2.

4.2 The SCWS equipment controls are provided in the MCR and the RSS as listed in Table 2.7.2-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuat~~ion~~or ~~and~~ control system (PACS) module in Table 2.7.2-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 The SCWS has the following interlocks: The standby recirculation pump automatically starts if the running pump trips.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.7.2-2 are powered from Class 1E division as listed in Table 2.7.2-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.7.2-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 2.7.2-2 for harsh environment can perform the safety function in Table 2.7.2-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 The SCWS chiller refrigerating units shown on Figure 2.7.2-1 have the capacity to provide chilled water at the temperature to support the heat removal requirements of each user.

7.2 The pumps listed in Table 2.7.2-1 have sufficient net positive suction head absolute.

Table 2.7.2-3—Safety Chilled Water System ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.2	Check valves listed in Table 2.7.2-1 will function as listed in Table 2.7.2-1.	Tests will be performed for the operation of the check valves listed in Table 2.7.2-1.	The check valves listed in Table 2.7.2-1 perform the functions listed in Table 2.7.2-1.
3.3	Deleted.~~Piping indicated in Figure 2.7.2-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.7.2-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.7.2-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.7.2-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.7.2-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.7.2-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.7.2-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~
~~3.3a~~	~~The piping identified as being within the ASME Code Section III boundary as indicated in Figure 2.7.2-1 has been designed in accordance with ASME Code Section III requirements including seismic loads.~~	~~Analysis of the as-designed piping will be performed in accordance with ASME Code Section III requirements for the piping identified in Figure 2.7.2-1.~~	~~ASME Code Section III stress reports exist and conclude that the as-designed piping identified as ASME Code Section III in Figure 2.7.2 meets ASME Code Section III design requirements.~~

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Table 2.7.2-3—Safety Chilled Water System ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

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Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.5	Deleted.~~Supports for piping shown as ASME Section III in Figure 2.7.2-1 will be designed per in accordance with ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III in Figure 2.7.2-1 are designed to in accordance with ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III in Figure 2.7.2-1.~~ ~~c. Support mass is less than 10 ten percent of the adjacent pipe span for piping shown as ASME Section III in Figure 2.7.2-1.~~
3.6	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.2-1~~.	Deleted~~An analysis will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.2-1~~.
3.7	Deleted~~Specifications exist for piping shown as ASME Section III in Figure 2.7.2-1~~.	Deleted~~An analysis will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III in Figure 2.7.2-1~~.
3.8	Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.2.7-2.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.2-1.~~
3.9	Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1.

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Table 2.7.2-3—Safety Chilled Water System ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.10	Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.11	Pressure boundary welds in portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 has been performed in accordance with ASME Code Section III.
3.12	Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	Portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the SCWS piping shown as ASME Code Section III in Figure 2.7.2-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and RSS as identified in Table 2.7.2-2.	Inspections will be performed for the existence or retrievability of the displays in the MCR or the RSS as listed in Table 2.7.2-2.	a. The displays listed in Table 2.7.2-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.7.2-2 as being retrieved in the RSS can be retrieved in the RSS.

ensure cooling tower basin water levels remain within established limits.

- The ESW system provides the means of transferring heat loads from the dedicated CCW heat exchanger under severe accident conditions to ensure containment integrity.

- Freeze protection is provided by diverting ESW return flow directly to the tower basin and controlling fan operation under low load/low ambient temperature conditions.

The non-safety-related dedicated ESWS train provides water as a cooling medium to the non-safety-related dedicated CCWS train heat exchanger and to the division 4 ESWS ESWPBVS room cooler for the removal of reject heat under severe accident conditions.

2.0 Arrangement

2.1 The functional arrangement of the ESWS is as shown in Figure 2.7.11-1—Essential Service Water System Functional Arrangement.

2.2 The location of the ESWS equipment is as listed in Table 2.7.11-1—Essential Service Water System Equipment Mechanical Design.

2.3 Physical separation exists between divisions of the ESWS.

2.4 ~~The non-safety-related dedicated ESWS train functional arrangement is as shown in Figure 2.7.11-1~~Deleted.

2.5 ~~The location of non-safety-related dedicated ESWS equipment is in the division 4 essential service water pump structure (ESWPS) and division 4 Safeguard Building (SB)~~Deleted.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.7.11-1 as ASME Code Section III is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.7.11-1 will function as listed in Table 2.7.11-1.

3.3 ~~Piping indicated in Figure 2.7.11-1 as ASME Code Section III is designed and tested in accordance with ASME Code Section III.~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 2.7.11-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.7.11-1.

3.5 ~~Non-safety-related ASME classification boundaries for dedicated ESWS are as indicated in Figure 2.7.11-1~~Deleted.

3.6 ~~Non-safety related equipment in the dedicated ESWS as indicated in Figure 2.7.11-1 is designed and tested to ASME B31.1, Power Piping Code and ASME Section VIII, Pressure Vessel Code~~Deleted.

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3.7 ~~Non-safety-related piping in the dedicated ESWS as indicated in Figure 2.7.11-1 is designed and tested in accordance with ASME B31.1 Section Code~~Deleted.

3.8 Deleted.~~Supports for piping shown as ASME Section III in Figure 2.7.11-1 will be designed per ASME Section III.~~

3.9 ~~Specifications exist for components listed as ASME Section III in Table 2.7.11-1~~Deleted.

3.10 ~~Specifications exist for piping shown as ASME Section III in Figure 2.7.11-1~~Deleted.

3.11 Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.11-1.~~

3.12 Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are designed in accordance with ASME Code Section III requirements.

3.13 Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are installed in accordance with an ASME Code Section III Design Report.

3.14 Pressure boundary welds in portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are in accordance with ASME Code Section III.

3.15 Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 retain their pressure boundary integrity at their design pressure.

3.16 Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are installed in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Displays and Controls

4.1 Displays listed in Table 2.7.11-2— Essential Service Water System Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.7.11-2.

4.2 The ESWS equipment controls are provided in the MCR and the RSS as listed in Table 2.7.11-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and actuator~~ion and~~ control system (PACS) module in Table 2.7.11-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 If one ESWS pump (30PEB10/20/30/40 AP001) fails during normal operation, a switchover to the other ESWS train is carried out automatically for the entire cooling train and is initiated by the CCWS Switchover sequence.

4.5 A spurious closure of the ESWS pump discharge valve (30PEB10/20/30/40 AA005) ~~has the same consequences as the failure of the ESW pump (30PEB10/20/30/40 AP001),~~ results in a switchover to the other ESWS train ~~is carried out~~ automatically for the entire cooling train and is initiated by the CCWS Switchover sequence.

4.6 ~~The non-safety-related dedicated ESWS is provided with displays retrievable in the MCR and the RSS~~Deleted.

Table 2.7.11-3—Essential Service Water System ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~6~~ 7 Sheets)

Commitment Wording		Inspections, Tests, or ~~Analysis~~Analyses	Acceptance Criteris
		c. Hydrostatic testing of the equipment identified in Table 2.7.11-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. Equipment identified in Table 2.7.11-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 2.7.~~8~~11-1 will function as listed in Table 2.7.11-1.	Tests will be performed for the operation of the check valves listed in Table 2.7.11-1.	The check valves listed in Table 2.7.11-1 perform the functions listed in Table 2.7.11-1.
3.3	Deleted.~~Piping indicated in Figure 2.7.11-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.7.11-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.7.11-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.7.11-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.7.11-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.7.11-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.7.11-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.7.11-3—Essential Service Water System ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~6~~ 7 Sheets)

Commitment Wording		Inspections, Tests, or ~~Analysis~~Analyses	Acceptance Criteris
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.7.11-1 to verify that the equipment including anchorage is installed as specified on the construction drawings..	b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.7.11-1 is installed as specified on the construction drawings.
3.5	Deleted.	Deleted.	Deleted.
3.6	Deleted.	Deleted.	Deleted.
3.7	Deleted.	Deleted.	Deleted.
3.8	Deleted.~~Supports for piping shown as ASME Section III in Figure 2.7.11-1 will be designed per in accordance with ASME Section III.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III in Figure 2.7.11-1 are designed to in accordance with ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III in Figure 2.7.11-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III in Figure 2.7.11-1.~~
3.9	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.11-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.7.11-1~~.
3.10	Deleted~~Specifications exist for piping shown as ASME Section III in Figure 2.7.11-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III in Figure 2.7.11-1~~.
3.11	Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.11-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III in Figure 2.7.11-1.~~

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Table 2.7.11-3—Essential Service Water System ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~6~~ 7 Sheets)

Commitment Wording		Inspections, Tests, or ~~Analysis~~Analyses	Acceptance Criteris
3.12	Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1.
3.13	Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.14	Pressure boundary welds in portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 has been performed in accordance with ASME Code Section III.
3.15	Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.16	Portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the ESWS piping shown as ASME Code Section III in Figure 2.7.11-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

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2.8.2 Main Steam System

1.0 Description

The main steam system (MSS) is a safety-related system. It transports steam from the steam generators to the turbine generator during normal operations. The MSS also isolates the steam generators and the safety-related portion of MSS from the non-safety-related portion during design basis accidents. The main steam pipe lines from the steam generators to and including the fixed seismic restraints downstream of the main steam isolation valves (MSIVs) are safety related. The main steam lines downstream of the fixed seismic restraints to the turbine generator are non-safety-related.

The MSS provides the following safety-related functions:

- The MSS isolates the steam generators and associated portion of main steam lines.
- The MSS provides residual heat removal by venting steam to the atmosphere via the main steam relief trains (MSRTs) and the main steam safety valves (MSSVs).

The MSS provides the following non-safety-related functions:

- The MSS and the turbine bypass system provide the capability to dump steam to the main condenser.

2.0 Arrangement

2.1 The functional arrangement of the MSS is as shown in Figure 2.8.2-1—MSS Functional Arrangement.

2.2 The location of the MSS equipment is as listed in Table 2.8.2-1—MSS Equipment Mechanical Design.

2.3 Physical separation exists between divisions of the MSS.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.8.2-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

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3.2 ~~Piping indicated in Figure 2.8.2-1 as ASME Code Section III is designed and tested in accordance with ASME Code Section III~~Deleted.

3.3 Equipment identified as Seismic Category I in Table 2.8.2-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.8.2-1.

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3.4 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.8.2-1 will be designed in accordance with ASME Section III.~~

3.5 Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.2-1~~.

3.6 Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.8.2-1~~.

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3.7 Deleted. ~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.2-1.~~

3.8 Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are designed in accordance with ASME Code Section III requirements.

3.9 Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are installed in accordance with an ASME Code Section III Design Report.

3.10 Pressure boundary welds in portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are in accordance with ASME Code Section III.

3.11 Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 retain their pressure boundary integrity at their design pressure.

3.12 Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.8.2-2—MSS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.8.2-2.

4.2 The MSS equipment controls are provided in the MCR and the RSS as listed in Table 2.8.2-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and ~~actuation~~ actuator~~and~~ control system (PACS) module in Table 2.8.2-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.8.2-2 are powered from the Class 1E division as listed in Table 2.8.2-2 in a normal or alternate feed condition.

5.2 ~~Each MSSV is spring loaded to close.~~ Each main steam relief isolation valve fails closed on loss of electric power to the valve actuator. ~~Each MSIV fails closed on loss of hydraulic pressure or loss of electric power to the actuator. Each turbine bypass valve fails closed on loss of power. Other valves listed in Table 2.8.2-2 fail as-is on loss of power.~~

5.3 Each MSIV fails closed on loss of hydraulic pressure or loss of electric power to the valve actuator.

5.4 Each turbine bypass valve fails closed on loss of power to the valve actuator.

5.5 Each main steam relief control valve, main steam warming isolation valve, and main steam warming control valve fails as-is on loss of electric power to the valve actuator.

Table 2.8.2-3—MSS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.8.2-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. Equipment identified in Table 2.8.2-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.
3.2	Deleted.~~Piping indicated in Figure 2.8.2-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.8.2-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.8.2-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.8.2-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.8.2-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.8.2-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.8.2-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~
~~3.2a~~	~~The piping identified as being within the ASME Code Section III boundary as indicated in Figure 2.8.2-1 has been designed in accordance with ASME Code Section III requirements including seismic loads.~~	~~Analysis of the as-designed piping will be performed in accordance with ASME Code Section III requirements for the piping indicated in Figure 2.8.2-1.~~	~~ASME Code Section III stress reports exist and conclude that the as-designed piping identified as ASME Code Section III in Figure 2.8.2-1 meets ASME Code Section III design requirements.~~
~~3.2b~~	~~The piping identified as~~	~~Inspections will be conducted~~	~~A report exists and concludes~~

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Table 2.8.2-3—MSS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~5~~ 6 Sheets)

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	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.4	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.8.2-1 will be designed per ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.8.2-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.8.2-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.8.2-1.~~
3.5	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.2-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.2-1~~.
3.6	Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.8.2-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III on Figure 2.8.2-1~~.
3.7	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.2-1~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.2-1.~~
3.8	Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1.

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Table 2.8.2-3—MSS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC (~~5~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.9	Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.10	Pressure boundary welds in portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 has been performed in accordance with ASME Code Section III.
3.11	Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.12	Portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the MSS piping shown as ASME Code Section III in Figure 2.8.2-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and the RSS as identified in Table 2.8.2-2.	Inspections will be performed for the existence or retrievability of the displays in the MCR or the RSS as listed in Table 2.8.2-2.	a. The displays listed in Table 2.8.2-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.8.2-2 as being retrieved in the RSS can be retrieved in the RSS.

2.8.6 Main Feedwater System

1.0 Description

The main feedwater system (MFWS) is a non-safety-related system with portions that are safety related. It transports and controls feedwater from the deaerator/feedwater storage tank to the steam generators (SG). It includes the startup/shutdown feedwater supply. The MFWS is safety related from the connections to the SGs to the fixed seismic restraint in each main feedwater line and to the fixed seismic restraint in each startup/shutdown feedwater line.

The MFWS provides the following safety-related function:

- Shut off main feedwater supply and startup/shutdown feedwater supply.

The MFWS provides the following non-safety-related functions:

- The MFWS supplies feedwater to the SGs for power operation.
- A startup/shutdown system supplies feedwater to the SGs for low-power operation.

2.0 Arrangement

2.1 The functional arrangement of the MFWS is as shown in Figure 2.8.6-1—MFWS Functional Arrangement.

2.2 The location of the MFWS equipment is as listed in Table 2.8.6-1—MFWS Equipment Mechanical Design.

2.3 Physical separation exists between the safety-related portions of the main feedwater divisions. The safety-related valves in Divisions 1 and 2 are located in separate valve rooms in Safeguard Building (SB) 1. The safety-related valves in Divisions 3 and 4 are located in separate valve rooms in SB 4.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 2.8.6-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 2.8.6-1 will function as listed in Table 2.8.6-1.

3.3 ~~Piping indicated in Figure 2.8.6-1 as ASME Code Section III is designed and tested in accordance with ASME Code Section III~~Deleted.

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3.4 Equipment identified as Seismic Category I in Table 2.8.6-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.8.6-1.

3.5 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.28.46-1 will be designed per ASME Section III.~~

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3.6 Deleted~~Specifications exist for components listed as ASME Section III in Table 2.2.4-1~~.

3.7 Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.2.4-1~~.

3.8 Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.6-1.~~

3.9 Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are designed in accordance with ASME Code Section III requirements.

3.10 Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are in accordance with ASME Code Section III.

3.12 Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 retain their pressure boundary integrity at their design pressure.

3.13 Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Control (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.8.6-2—MFWS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) as listed in Table 2.8.6-2.

4.2 The MFWS equipment controls are provided in the MCR as listed in Table 2.8.6-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and ~~actuation~~ actuator~~and~~ control system (PACS) module in Table 2.8.6-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.8.6-2 are powered from the Class 1E division as listed in Table 2.8.6-2 in a normal or alternate feed condition.

5.2 The main feedwater full load isolation valves (MFWFLIV) ~~are energized to close via two separate closing lines. The MFWFLIVs~~ fail closed on loss of hydraulic pressure to the valve actuator. ~~The main feedwater check valves inside the Reactor Building (RB) close on flow reversal. Other valves listed in Table 2.8.6-2 fail as-is on loss of power.~~

5.3 Other valves listed in Table 2.8.6-2 except the MFWFLIVs fail as-is on loss of electric power to the valve actuator.

6.0 Environmental Qualifications

6.1 Electrical drivers for equipment listed in Table 2.8.6-2 for harsh environment can perform the safety function in Table 2.8.6-1 following exposure to the design basis environments for the time required.

Table 2.8.6-3—MFWS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ 5 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 2.8.6-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. Equipment identified in Table 2.8.6-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 2.8.6-1 will function as listed in Table 2.8.6-1.	Tests will be performed for the operation of the check valves listed in Table 2.8.6-1.	The check valves listed in Table 2.8.6-1 perform the functions listed in Table 2.8.6-1.
3.3	Deleted.~~Piping indicated in Figure 2.8.6-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.8.6-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.8.6-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.8.6-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.8.6-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.8.6-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.8.6-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 2.8.6-3—MFWS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ 5 Sheets)

	Commitment Wording	Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.8.6-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.8.6-1 including anchorage is installed as specified on the construction drawings.
3.5	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.8.6-1 will be designed per ASME Section III.~~	Deleted.~~An analysis will be performed.~~	Deleted.~~a. Supports for piping shown as ASME Section III on Figure 2.8.6-1 are designed to ASME Section III.~~ ~~b. Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.8.6-1.~~ ~~c. Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.8.6-1.~~
3.6	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.6-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.6-1~~.
3.7	Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.8.6-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III on Figure 2.8.6-1~~.
3.8	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.6-1.~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.6-1.~~

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Table 2.8.6-3—MFWS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ 5 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.9	Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1.
3.10	Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.11	Pressure boundary welds in portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 has been performed in accordance with ASME Code Section III.
3.12	Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	Portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the MFWS piping shown as ASME Code Section III in Figure 2.8.6-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.

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2.8.7 Steam Generator Blowdown System

1.0 Description

The steam generator blowdown system (SGBS) is a non-safety-related system with safety-related portions. It assists in maintaining the chemical characteristics of the secondary water within permissible limits. The SGBS is safety related from its connections to the steam generators to the outer containment isolation valves. The remaining portion of the blowdown system downstream of the outer containment isolation valves is non-safety-related.

The SGBS provides the following safety-related functions:

- Containment isolation.
- SG blowdown isolation.

2.0 Arrangement

2.1 The functional arrangement of the SGBS is as shown in Figure 2.8.7-1—SGBS Functional Arrangement.

2.2 The location of the SGBS equipment is as listed in Table 2.8.7-1—SGBS Equipment Mechanical Design.

3.0 Mechanical Design Features

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3.1 Equipment listed in Table 2.8.7-1 as ASME Code Section III is designed, welded, and hydrostatically tested in accordance with ASME Code Section III.

3.2 ~~Piping indicated in Figure 2.8.7-1 as ASME Code Section III is designed and tested in accordance with ASME Code Section III~~Deleted.

3.3 Equipment identified as Seismic Category I in Table 2.8.7-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 2.8.7-1.

3.4 Deleted.~~Supports for piping shown as ASME Section III on Figure 2.2.42.8.7-1 will be designed per ASME Section III.~~

3.5 Deleted~~Specifications exist for components listed as ASME Section III in Table 2.2.42.8.7-1~~.

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3.6 Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.2.42.8.7-1~~.

3.7 Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.7-1.~~

3.8 Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are designed in accordance with ASME Code Section III requirements.

3.9 Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are installed in accordance with an ASME Code Section III Design Report.

3.10 Pressure boundary welds in portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are in accordance with ASME Code Section III.

3.11 Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 retain their pressure boundary integrity at their design pressure.

3.12 Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are installed in accordance with ASME Code Section III requirements.

4.0 Instrumentation and Controls (I&C) Design Features, Displays, and Controls

4.1 Displays listed in Table 2.8.7-2—SGBS Equipment I&C and Electrical Design are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.8.7-2.

4.2 SGBS equipment controls are provided in the MCR and the RSS as listed in Table 2.8.7-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a priority and ~~actuation~~ actuator~~and~~ control system (PACS) module in Table 2.8.7-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

4.4 The SGBS has an interlock~~s~~ to close ~~the containment isolation valves on a containment isolation signal as well as interlocks to close~~ the blowdown isolation valves if there is an EFW actuation signal.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.8.7-2 are powered from the Class 1E division as listed in Table 2.8.7-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.8.7-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Electrical drivers for equipment listed in Table 2.8.7-2 for harsh environment can perform the safety function in Table 2.8.7-1 following exposure to the design basis environments for the time required.

7.0 Equipment and System Performance

7.1 Class 1E valves listed in Table 2.8.7-2 can perform the function listed in Table 2.8.7-1 under system design conditions.

Table 2.8.7-3—SGBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ 5 Sheets)

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Commitment Wording		Inspections, Tests, ~~or Analysis~~ Analyses	Acceptance Criteria
3.2	Deleted.~~Piping indicated in Figure 2.8.7-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 2.8.7-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 2.8.7-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 2.8.7-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 2.8.7-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 2.8.7-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 2.8.7-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~
~~3.2a~~	~~The piping identified as being within the ASME Code Section III boundary as indicated in Figure 2.8.7-1 has been designed in accordance with ASME Code Section III requirements including seismic loads.~~	~~Analysis of the as-designed piping will be performed in accordance with ASME Code Section III requirements for the piping indicated in Figure 2.8.7-1.~~	~~ASME Code Section III stress reports exist and conclude that the as-designed piping identified as ASME Code Section III in Figure 2.8.7-1 meets ASME Code Section III design requirements.~~

Table 2.8.7-3—SGBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ 5 Sheets)

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	Commitment Wording	Inspections, Tests, ~~or Analysis~~ Analyses	Acceptance Criteria
3.4	Deleted.~~Supports for piping shown as ASME Section III on Figure 2.8.7-1 will be designed per ASME Section III.~~	Deleted.~~An analysis will be performed.~~	a.Deleted.~~Supports for piping shown as ASME Section III on Figure 2.8.7-1 are designed in accordance with ASME Section III.~~ ~~a.Snubbers have been identified, including those analyzed for fatigue for piping shown as ASME Section III on Figure 2.8.7-1.~~ ~~c.Support mass is less than ten percent of the adjacent pipe span for piping shown as ASME Section III on Figure 2.8.7-1.~~
3.5	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.7-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 2.8.7-1~~.
3.6	Deleted~~Specifications exist for piping shown as ASME Section III on Figure 2.8.7-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III on Figure 2.8.7-1~~.
3.7	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.7-1~~	Deleted.~~An inspection will be performed.~~	Deleted.~~Specifications exist for supports for piping shown as ASME Section III on Figure 2.8.7-1~~
3.8	Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1.
3.9	Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.

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Table 2.8.7-3—SGBS ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~4~~ 5 Sheets)

	Commitment Wording	Inspections, Tests, ~~or~~ ~~Analysis~~ Analyses	Acceptance Criteria
3.10	Pressure boundary welds in portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 has been performed in accordance with ASME Code Section III.
3.11	Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.12	Portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the SGBS piping shown as ASME Code Section III in Figure 2.8.7-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and the RSS as identified in Table 2.8.7-2.	Inspections will be performed for the existence or retrieveability of the displays in the MCR or the RSS as listed in Table 2.8.7-2.	a. The displays listed in Table 2.8.7-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.8.7-2 as being retrieved in the RSS can be retrieved in the RSS.
4.2	Controls exist in the MCR and the RSS as identified in Table 2.8.7-2.	Tests will be performed for the existence of control signals from the MCR and the RSS to the equipment listed in Table 2.8.7-2.	a. The controls listed in Table 2.8.7-2 as being in the MCR exist in the MCR. b. The controls listed in Table 2.8.7-2 as being in the RSS exist in the RSS.

3.5 Containment Isolation

1.0 Description

1.1 The ~~r~~Reactor ~~b~~Building (RB) is designed with a ~~primary~~ Reactor ~~c~~Containment ~~b~~Building (RCB) and a ~~separate~~ Reactor ~~s~~Shield ~~b~~Building (RSB). The ~~primary containment building~~RCB provides the primary means of confining radioactivity that may be released following a postulated design basis accident. The ~~primary containment and shield buildings~~RCB and RSB are penetrated by systems to provide various functions for systems housed inside containment. These penetrations are made for mechanical and electrical systems, and include facilities for the transport of personnel and equipment.

1.2 The function for containment isolation is to isolate fluid system piping that penetrates the ~~Reactor Building~~RB to prevent the discharge of radioactivity from containment following a postulated design basis accident. Containment isolation barriers are components of the penetrating systems and are generally included with the system descriptions in Tier 1, Chapter 2. This section includes containment isolation barriers that are not included in Tier 1, Chapter 2.

2.0 Arrangement

2.1 The functional arrangement of the containment isolation equipment is as shown in Figure 3.5-1—Representative Containment Isolation Valve Arrangement~~s~~ and as indicated in Table 3.5-1—Containment Isolation Equipment Mechanical Design.

2.2 The location of the containment isolation equipment is as listed in Table 3.5-1.

3.0 Mechanical Design Features

3.1 Equipment listed in Table 3.5-1 as ASME Code Section III is designed, welded, and hydrostatically tested ~~to~~ in accordance with ASME Code Section III.

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3.2 Check valves listed in Table 3.5-1 will function as listed in Table 3.5-1.

3.3 ~~Piping indicated in Figure 3.5-1 as ASME Code Section III for the containment isolation configurations identified in Table 3.5-1 is designed, welded, and tested in accordance with ASME Code Section III~~Deleted.

3.4 Equipment identified as Seismic Category I in Table 3.5-1 can withstand ~~a~~ seismic design basis ~~seismic~~ load~~s~~ without loss of safety function as listed in Table 3.5-1.

3.5 Deleted~~Specifications exist for components listed as ASME Section III in Table 3.5-1~~.

3.6 Deleted~~Specifications exist for piping shown as ASME Section III in Figure 3.5-1 for the containment isolation configurations identified in Table 3.5-1~~.

3.7 Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are designed in accordance with ASME Code Section III requirements.

3.8 Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are installed in accordance with an ASME Code Section III Design Report.

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3.9 Pressure boundary welds in portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are in accordance with ASME Code Section III.

3.10 Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 retain their pressure boundary integrity at their design pressure.

3.11 Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are installed in accordance with ASME Code Section III requirements.

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4.0 I&C Design Features, Displays and Controls

4.1 Displays listed in Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design are retrievable in the main control room (MCR) as listed in Table 3.5-2.

4.2 The containment isolation equipment controls are provided in the MCR as listed in Table 3.5-2.

4.3 ~~Actuators~~ Equipment listed as being controlled by a ~~Priority~~ priority and ~~A~~actuat~~ion~~or ~~and Control~~ control ~~System~~ system (PACS) module in Table 3.5-2 responds to the state requested by a test signal~~are controlled by a PACS module~~.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 3.5-2 are powered from the Class 1E division as listed in Table 3.5-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 3.5-2 fail as-is on loss of power.

5.3 Containment electrical penetrations routing Class 1E cables have only Class 1E cables or associated cables.

5.4 Separation exists between containment electrical penetration assemblies routing each division of Class 1E cables, and between assemblies containing Class 1E and non-Class 1E cables.

5.5 Containment electrical penetrations are protected from fault currents that are greater than their continuous current rating.

6.0 Environmental Qualifications

6.1 Equipment listed in Table 3.5 -2 for harsh environment can perform the function in Table 3.5-1 following exposure to the design basis environments for the time required.

6.2 Containment electrical penetrations assemblies are qualified for harsh environment and perform the required safety function following exposure to the operational and design basis environments.

7.0 Equipment and System Performance

7.1 Class 1E valves listed in Table 3.5-2 can perform the function listed in Table 3.5-1 under system design conditions.

Table 3.5-3—Containment Isolation ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~7~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
		c. Hydrostatic testing of the equipment identified in Table 3.5-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.	c. Equipment identified in Table 3.5-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.
3.2	Check valves listed in Table 3.5-1 will function as listed in Table 3.5-1.	Tests will be performed for the operation of the check valves listed in Table 3.5-1.	The check valves listed in Table 3.5-1 perform the functions listed in Table 3.5-1.
3.3	Deleted.~~Piping indicated in Figure 3.5-1 as ASME Code Section III is designed, welded, and tested in accordance with ASME Code Section III.~~	Deleted.~~a. Analysis of the as-designed piping identified in Figure 3.5-1 as ASME Code Section III will be performed per ASME Code Section III design requirements.~~ ~~b. Inspections will be conducted on the as-built piping identified in Figure 3.5-1 as ASME Code Section III to verify welding has been performed per ASME Code Section III welding requirements.~~ ~~c. Hydrostatic testing of the as-built piping identified in Figure 3.5-1 as ASME Code Section III will be performed per ASME Code Section III hydrostatic testing requirements.~~	Deleted.~~a. ASME Code Section III stress reports exist and conclude that the as-designed piping identified in Figure 3.5-1 as ASME Code Section III meets ASME Code Section III design requirements.~~ ~~b. As-built piping identified in Figure 3.5-1 as ASME Code Section III has been welded per ASME Code Section III welding requirements.~~ ~~c. As-built piping identified in Figure 3.5-1 as ASME Code Section III has been hydrostatically tested per ASME Code Section III hydrostatic testing requirements.~~

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Table 3.5-3—Containment Isolation ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~7~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.4	Equipment identified as Seismic Category I in Table 3.5-1 can withstand ~~a~~ seismic design basis ~~seismic~~ loads without loss of safety function as listed in Table 3.5-1.	~~a. Inspection will be performed of the equipment identified as Seismic Category I in Table 3.5-1.~~ ~~b~~a. Type tests, ~~tests,~~ analyses or a combination of type tests and analyses will be performed on the equipment designated as Seismic Category I in Table 3.5-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements.	~~a. A report exists and concludes that the equipment designated as Seismic Category I in Table 3.5-1 is installed as designed.~~ ~~b~~a. Tests/analysis~~A~~ reports exist~~s~~ and conclude~~s~~ that the Seismic Category I equipment ~~designated as Seismic Category I~~listed in Table 3.5-1 can withstand ~~a design basis~~ seismic design basis loads without loss of safety function.
		b. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 3.5-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 3.5-1 including anchorage is installed as specified on the construction drawings.
3.5	Deleted~~Specifications exist for components listed as ASME Section III in Table 3.5-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for components listed as ASME Section III in Table 3.5-1~~.
3.6	Deleted~~Specifications exist for piping shown as ASME Section III in Figure 3.5-1 for the containment isolation configurations identified in Table 3.5-1~~.	Deleted~~An inspection will be performed~~.	Deleted~~Specifications exist for piping identified as ASME Section III in Figure 3.5-1 for the containment isolation configurations identified in Table 3.5-1~~.
3.7	Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are designed in accordance with ASME Code Section III requirements.	Inspections will be performed for the existence of ASME Code Section III Design Reports.	ASME Code section III Design Reports (NCA-3550) exist for portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1.

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Table 3.5-3—Containment Isolation ~~Inspections, Tests, Analyses, and Acceptance Criteria~~ITAAC
(~~7~~ 6 Sheets)

Commitment Wording		Inspections, Tests, ~~or Analysis~~Analyses	Acceptance Criteria
3.8	Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are installed in accordance with an ASME Code Section III Design Report.	Inspections will be performed to verify the existence of an analysis which reconciles as-fabricated deviations to the ASME Code Design Report as required by ASME Code Section III.	For portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1, ASME Code Data Reports (N-5) exist and conclude that reconciliation (NCA-3554) of the as-installed system with the Design Report (NCA-3550) has occurred.
3.9	Pressure boundary welds in portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 has been performed in accordance with ASME Code Section III.
3.10	Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 retain their pressure boundary integrity at their design pressure.	Hydrostatic tests will be performed on the as-fabricated system.	For portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.11	Portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1 are installed in accordance with ASME Code Section III requirements.	An inspection for the existence of ASME N–5 Data Reports will be performed.	For portions of the containment isolation piping shown as ASME Code Section III in Figure 3.5-1, N–5 Data Reports exist and conclude that installation is in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR as identified in Table 3.5-2.	Inspections will be performed for the existence or retrievability of the displays in the MCR as listed in Table 3.5-2.	The displays listed in Table 3.5-2 as being retrieved in the MCR can be retrieved in the MCR.

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